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Mass distribution of Perseid meteoroids

Bel'kovich O., Ishmukhametova M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

An analysis of the Perseid meteoroid mass distribution is given. It is shown that particle mass distributions are qualitatively the same along the entire orbit of the stream. The extra minima in the cross sections of the stream at the ascending and descending branches of the curve of the parameter S indicate a jetlike nature of the stream. The variations of the nodal longitudes of maximum stream activity versus the minimum observed mass of meteoroids are found along the entire orbit of the stream. The positions of maximum activity for particles with minimum detectable masses larger than 1 and 10-3 g are shifted by 1.4 degrees in solar longitude, with larger longitudes for smaller particles.

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